

REMARKS/ARGUMENTS

Claims 7-18 are pending in the present application, of which claims 7 and 15 are independent claims. Claims 1-6 have been canceled without prejudice or disclaimer. New claims 7-18 have been added by this Amendment.

Claim Rejections under 35 USC § 103

Claims 1-3 stand rejected under 35 USC § 103(a) as unpatentable over U.S. Patent No. 7,254,832 (“Christie”) in view of U.S. Patent No. 6,631,416 (“Bendinelli”). Claims 4-6 stand rejected under 35 USC § 103(a) as unpatentable over Christie and Bendinelli in view of U.S. Patent Application Publication No. 2004/0028035 (“Read”).

Summary of Subject Matter Disclosed in the Specification

The following descriptive details are based on the specification. They are provided only for the convenience of the Examiner as part of the discussion presented herein, and are not intended to argue limitations which are unclaimed.

Disclosed embodiments are directed to a system for communication between a first computer terminal 1 in a private IP network 7 and a second computer terminal 5 in a public IP network. The system includes network boundary equipment 3, e.g., a gateway or firewall. (See paragraph 17 of the published application, U.S. 2007/0258470 A1).

Conventionally, a packet arriving from the public network can be forwarded within the private network only if a packet from the private network has previously created a route for it. (See paragraph 8). However, in the disclosed embodiments, a mediation system 2 in the private IP network 7 that is associated with the first computer terminal 1 makes a TCP/UDP/IP interface available to the second computer terminal 5 via a control server 4 in the public IP network. (See paragraph 18). In particular, the mediation system 2 connects to a dedicated service port of the control server 4 via a TCP channel.

The mediation system 2 sets up a communications tunnel 6 through the boundary equipment 3 to the control server 4 via the dedicated service port. (See paragraphs 19 and 21). The mediation system 2 uses this connection to inform the control server 4 about its state and environment in the private network. (See paragraph 24). The control server 4 can then perform various operations on the mediation system 2 via the communications tunnel 6 established through the boundary equipment 3. (See paragraph 25). These operations include such things as opening ports on the mediation system 2 and relaying packets through the mediation system 2 to ports in the private network.

Summary of Cited References

Christie relates to treating a private network firewall 225 as a media gateway network entity. (See Fig. 2 and Abstract of Christie). On a private network side, there is a media gateway controller 205 that is operatively connected to at least one media gateway endpoint 210. The connection between media gateway controller 205 and media gateway endpoint 210 is via a media gateway control path 215. Media gateway controller 205 is also a node on a Local Area

Network (LAN) 220. Media gateway controller 205 is also operatively connected to the firewall 225 via a firewall control path 230. (See col. 4, line 63 through col. 5, line 6 of Christie).

The public network side includes a packet data network 250, such as the Internet, and a second media gateway controller 255 that acts as a central Office IP Call Server to serve other media gateway endpoints 260, 265 via media gateway control path(s) 270. (See col. 5, lines 11-15 of Christie).

Media gateway controller 205 is responsible for approving communication stream requests emanating from or terminating at media gateway endpoint(s) 210 within the private network. If a called number is representative of a media gateway endpoint 260 outside the private network, then media gateway controller 205 realizes the need to create a “pinhole” in firewall 225 before it can approve the communication stream.

Media gateway controller 205, which is within the private network, communicates with media gateway controller 255 via call signaling path 280 in order to define a destination media gateway on the public network. (See col. 5, lines 21-40 of Christie). Similarly, if a call is incoming to the private side media gateway 210, private side media gateway controller 205 is contacted first by public network media gateway controller 255. The media gateway controllers 205, 255 exchange call-signaling information regarding media gateway endpoints 210, 260. (See col. 5, lines 41-45 of Christie).

Media gateway controller 205 then sends a request message to firewall 225 over a control path 230 requesting that firewall 225 open a pinhole to allow communication over bearer path 290. Communication will be between the network address pair corresponding to media gateway endpoints 210 and 260 in the private network and public network respectively. These endpoints

were previously defined in an exchange between media gateway controllers 205 and 255. (See col. 5, lines 46-66 of Christie).

Bendinelli relates to enabling a tunnel between two computers on a network. In Fig. 16A, Bendinelli shows a network 1600A that includes a gateway 1610, a tunnel 1620, and the network operations center 610. The tunnel 1620 may include a data path for voice, video, and/or data and a control path for control and monitoring information. (See col. 43, lines 4-18 of Bendinelli).

Arguments

New independent claim 7 recites, *inter alia*: “initializing a connection, by a mediation system which is associated with the first computer terminal in the private IP network, to a dedicated service port of a control server in the public IP network” and “establishing, by the mediation system, a communications tunnel between the mediation system and the dedicated service port of the control server, through a network boundary equipment, to make an IP interface of the mediation system available to the second computer terminal via the control server”, which the art cited by the Examiner fails to teach or suggest.

Claim 7 thus requires that the mediation system connect to a dedicated service port of the control server, which is the same port that is used for the communications tunnel between the mediation system and the control server. Furthermore, the mediation system initializes a connection to the control server and establishes the communications tunnel before the control server performs any operations on the mediation server.

In Christie, on the other hand, the media gateway controller 205 does not connect to the same service port of media gateway controller 255 that is used for the bearer path 290 through the firewall 225. Instead, the media gateway controller 205 connects to media gateway controller 255 via a separate call signaling path 280. The bearer path 290 in Christie is not a path or tunnel between the media gateway controller 205 and the media gateway controller 255 but, rather, a path between the network address pair corresponding to media gateway endpoints 210 and 260 in the private network and public network, respectively. Thus, Christie does not teach or suggest the configuration recited in claim 7.

Moreover, the media gateway controller 205 in Christie does not create a communications tunnel between itself and a service port of the media gateway controller 225 to make an IP interface of the media gateway controller 205 available to the second computer terminal via the media gateway controller 225, in contrast to Applicants' claimed configuration.

Christie thus fails to teach or suggest "initializing a connection, by a mediation system which is associated with the first computer terminal in the private IP network, to a dedicated service port of a control server in the public IP network" and "establishing, by the mediation system, a communications tunnel between the mediation system and the dedicated service port of the control server, through a network boundary equipment, to make an IP interface of the mediation system available to the second computer terminal via the control server", as recited in Applicants' claim 7.

Furthermore, as noted above, if a call is incoming to the private side media gateway 210 in Christie, private side media gateway controller 205 is contacted first by the public network media gateway controller 255. (See col. 5, lines 41-45 of Christie). The bearer path 290 is thus

created after the MGC 205 in the private network is contacted first by public network MGC 255. The MGC 205 in the private network in Christie therefore does not initialize a connection and establish the bearer path 290 before being contacted by the first public network MGC 255 in the case of an incoming call to the private side media gateway 210. In other words, the MGC 225 in the public network must contact the MGC 205 on the private side network before the bearer path 290 is created.

The configuration disclosed in Christie, which requires the public gateway controller to contact first the private side gateway controller, is contrary to Applicants' disclosed embodiments, in which the mediation server initializes a connection and creates the communications tunnel to the control server before a packet from the control server/public side terminal can be forwarded in the private network.

Nothing has been found in Bendinelli that would cure the deficiencies of Christie, discussed above, with respect to the features of Applicants' claim 7.

Accordingly, claim 7 is deemed to be patentable over the Examiner's proffered combination of Christie and Bendinelli.

The other cited reference, Read, was cited by the Examiner as purportedly disclosing the features of dependent claims. However, nothing has been found in Read that would remedy the deficiencies of Christie and Bendinelli with respect to the features of claim 7 discussed above.

New independent claim 15, recites features similar to claim 7 and is therefore also deemed to be patentable over the applied prior art for reasons discussed above with respect to claim 7.

Claims 8-14 and 16-18, which each depend from one of independent claims 7 or 15, distinguish the invention over the applied prior art for reasons discussed above in regard to the independent claims as well as on their own merits.

Conclusion

Based on all of the above, the present application is now in proper condition for allowance. Prompt and favorable action to this effect and early passing of this application to issue are respectfully solicited.

It is believed that no additional fees or charges are required at this time in connection with the present application. However, if any additional fees or charges are required at this time, they may be charged to our Patent and Trademark Office Deposit Account No. 03-2412.

Respectfully submitted,
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